

An inventory of the avifauna of the Bukit Batikap Protection Forest, Central Kalimantan, Indonesia

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We carried out a two-year inventory of the avifauna of the Bukit Batikap Protection Forest, located in the north-west of Central Kalimantan, Indonesia. A total of 275 species were recorded, one of which is classified as Critically Endangered, two as Endangered and 11 as Vulnerable in the IUCN Red List (2015). In addition, 20 species were endemic to Borneo and one undescribed species ('Spectacled Flowerpecker') was recorded in Indonesia for the first time. A further two species were new records for Kalimantan and four were new for Central Kalimantan province. Together, our results highlight the high conservation value of the Ulu Barito Important Bird Area.

INTRODUCTION

Until now most ornithological work on Borneo has been carried out in the Malaysian part of the island (the states of Sarawak and Sabah) and in coastal areas of Kalimantan, Indonesia (Mann 2008). The northern interior of the province of Central Kalimantan, in common with many other inland and montane areas of Kalimantan, has received little attention. Among the only published information is a series of reported sightings from short visits to this area by Holmes & Burton (1987) and a later detailed study on the Busang and Murung rivers by Wilkinson *et al.* (1991). Results from these surveys led to the declaration of the Ulu Barito Important Bird and Biodiversity Area (IBA), as designated by Birdlife International (2014) based on the presence of globally threatened, range-restricted and biome-restricted species (criteria A1, A2 and A3). No further surveys in this part of Central Kalimantan were carried out until very recently (Woxvold & Noske 2011, van Berkel *et al.* 2012, Cheyne *et al.* 2012) and these have improved our knowledge of the biodiversity of the region. In this paper we build on these earlier studies by presenting the results of an avifaunal inventory of Bukit Batikap Protection Forest. This is the most northerly part of the Ulu Barito IBA that has been surveyed to date.

The Bukit Batikap Protection Forest is located entirely within Murung Raya district of Central Kalimantan province and is part of the Muller-Schwanner mountain range that forms the central spine of Borneo and from which all major rivers originate. It is a 456,000 ha area of almost undisturbed tropical rainforest, surrounding the headwaters of the Joloi and Busang rivers, two major tributaries of the Barito River. Elevations range from 100 m to 1,580 m. Forest vegetation at lower elevations is dominated by trees of the *Dipterocarpaceae* family, resulting in mixed dipterocarp forests typical of the interior of Borneo. At around 200 to 350 m the forest type changes to hill forest characterised by reduced diversity of dipterocarp trees. This type of forest was encountered up to 750 m. Patches of *kerangas* (heath forest on peaty soils) were rare in the area. The Ulu Barito IBA is protected for the purpose of watershed conservation and logging is prohibited here. Therefore, the vast majority of the forest is in primary condition, although a few large timber trees have been illegally felled in areas close to rivers. Strips of riparian forest are present along all rivers, as well as secondary regrowth from historical crop cultivation. The local populace from small villages outside the protected area enter to collect products of commercial value, including *gaharu* (Agarwood *Aquilaria malaccensis*), gold, swiftlet nests, fish, and other wildlife for meat and the pet trade, as well as body parts. The forest is the site of an orangutan reintroduction project with over 130 Bornean Orangutans *Pongo pygmaeus* reintroduced by the Bornean Orangutan Survival Foundation (BOSF) by late 2014 (Husson *et al.* 2015). The objective of our avifaunal inventory was to describe

the bird diversity of the area and, to a lesser extent, to understand the breeding and migratory behaviour of the species present.

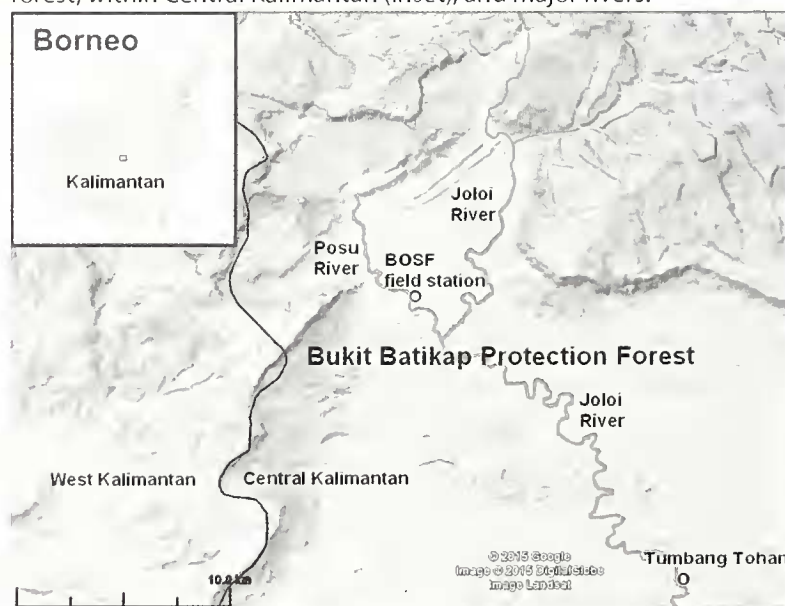
METHODS

All observations were made in the Joloi–Posu Valley in the south of the Protection Forest (Figure 1), bounded by 0.159°N to 0.085°S and 113.466°E to 113.619°E, by researchers based at Camp Totatjalu field station (0.041°N 113.499°E). Sightings were recorded by four experienced birdwatchers (JF, NB, AM and AvdK) from January 2014 to December 2015, covering both dry and wet seasons (Table 1). Sightings were mostly collected between 06h00 and 22h00, with occasional exceptions where sightings were also made in early morning (from 04h00) and at night-time

Table 1. Periods during which avian species were recorded at Bukit Batikap Protection Forest, Central Kalimantan, Indonesia, by Adhy Maruly (AM), Anna van der Kaaden, (AvdK), Johannes H. Fischer (JHF) and Nicholas S. Boyd (NSB).

Period	Days in field	Observers
January–February 2014	44	JHF, AvdK, AM
March–April 2014	37	JHF, AvdK, AM
June–July 2014	34	JHF, AvdK
October–December 2014	46	NSB
January–February 2015	26	NSB
February–April 2015	50	NSB
May–June 2015	40	NSB
September–October 2015	39	NSB
November–December 2015	36	NSB

Figure 1. Map showing the study location in Bukit Batikap Protection forest, within Central Kalimantan (inset), and major rivers.



(until 00h00). We identified birds visually with the aid of Myers (2010) and Phillipps & Phillipps (2011, 2014) and by calls using the database xeno-canto (www.xeno-canto.org). Information was also provided by local people from nearby villages, but a conservative approach was used when evaluating this data. For all sightings we noted the number of individuals, altitude, date, sex and age where possible. Furthermore, we recorded evidence of nests and nesting behaviour as well as information on roosting and lekking sites. Note that the study was not designed to estimate population densities. Most sightings originated from altitudes between 150 to 280 m along the rivers and their associated edges as well as the forest interior. Occasional visits to hills provided sightings from altitudes up to 750 m and occasional visits further downstream provided sightings from altitudes between 150 m and 120 m.

RESULTS AND DISCUSSION

During our survey we recorded a total of 275 species (Appendix 1), of which 20 were endemic and one near-endemic to Borneo, 74 species were classified as Near Threatened, 11 as Vulnerable, 2 as Endangered and 1 as Critically Endangered (IUCN 2015). Of the 275 species we confirmed that 251 were known to be residents of Borneo, 30 were winter visitors and 17 were passage migrants, with some species falling into more than one category (Mann 2008). Furthermore, one species previously not known to occur in Indonesia, 'Spectacled Flowerpecker' species *novum*, two species previously unknown from Kalimantan—Malayan Night Heron *Gorsachius melanolophus* and Zappey's Flycatcher *Cyanoptila cumatilis*—and four species previously unknown from Central Kalimantan—Red-legged Crake *Rallina fasciata*, Peregrine Falcon *Falco peregrinus*, Scaly-breasted Bulbul *Pycnonotus squamatus* and Paddyfield Pipit *Anthus rufulus*—were present in the study area. Some of the threatened species were seen in fairly large numbers and this demonstrates the importance of the area for bird diversity and conservation, and boosts the IBA status accorded to the Ulu Barito region of Central Kalimantan.

A considerable amount of time (almost nine months) was spent on site and included the migration and fruiting seasons, as well as a masting event. This enabled us to record a higher number of species than earlier studies, thus portraying the huge bird diversity of this part of Borneo. However, it should be noted that the study was biased towards the lowlands of Bukit Batikap Protection Forest and therefore that sub-montane and montane species are likely to be under-recorded. In addition, it should also be noted that some species were not recorded, e.g. Bornean Crestless Fireback *Lophura pyronota*, Bonaparte's Nightjar *Caprimulgus concretus*, Cinnamon-headed Green Pigeon *Treron fulvicollis*, Hook-billed Bulbul *Setornis criniger* and Brown-backed Flowerpecker *Dicaeum everetti*. This may be due to the rarity or unobtrusiveness of certain species, or their dependence on habitats that are scarce in the area. On the other hand, they may simply not be present as absence remains a hard thing to prove (Tingley & Beissinger 2009).

Bukit Batikap Protection Forest is currently protected for forest and wildlife conservation, but several species are nonetheless exploited for a number of purposes, including the cage-bird trade, which targets species such as Straw-headed Bulbul *Pycnonotus zeylanicus* (resulting in its potential local extinction); leafbirds *Chloropsis* spp., Blue-rumped Parrot *Psittinus cyanurus* and Blue-crowned Hanging Parrot *Loriculus galgulus*; hornbill heads for trade (see species accounts below) and swiftlet *Collocalia* spp. nests for human consumption, a major economic activity in this region. Several timber products are also sourced here. Although the surrounding forests are part of the same IBA, they are not protected. Instead they are designated for logging and coal mining, and the development of road networks may cause future

encroachment and conversion to large-scale agriculture, such as oil palm plantations. Despite these threats, the Bukit Batikap Protection Forest is located in the heart of one of the largest remaining expanses of tropical rainforest in the world and the diversity of birds and other wildlife here reflects that. Conservation actions by BOSF and the Indonesian Government to protect (recently) reintroduced orangutans give hope for the continued protection of these forests.

Selected species accounts

In the following section, we present notes on records of species classified as Critically Endangered, Endangered or Vulnerable in the IUCN Red List (2015), all endemic species and other species we consider notable. Taxonomy and nomenclature in the following section is based on Inskipp *et al.* (1996). Species deviating from Inskipp *et al.* (1996) are marked with an asterisk (*).

Long-billed Partridge *Rhizothera longirostris* (NT)

A pair was heard duetting close to Posu River (160 m) from late October to early November 2014 as well as in March 2015. This is the third record of this species from Central Kalimantan (Mann 2008).

Black Partridge *Melanoperdix nigra* (VU)

According to some local people, this species is not uncommon in the area, although others are completely unfamiliar with it. During this survey, it was recorded with certainty on three occasions from three different localities (between 170 and 210 m). All observations were of groups of four to eight individuals. This species was most likely under-recorded due to the fact that its vocalisations remain little known (van Balen & Fischer 2016). To establish better knowledge about the status and distribution of Black Partridge, a study of its true vocalisations is needed (BirdLife International 2001, van Balen & Fischer 2016).

*Bornean Crested Fireback *Lophura ignita* (NT)

This Bornean endemic seems to be much more common than Bulwer's Pheasant *L. bulweri*, the other *Lophura* pheasant found in this area. Individuals were seen weekly between January and May 2014 and daily during the fruiting season in June and July 2014, but less regularly from October 2014 to December 2015. It was observed that this species is actively snared in Bukit Batikap Protection Forest. We treat this as a new endemic species following McGowan *et al.* (2014).

Bulwer's Pheasant *Lophura bulweri* (VU)

Local people claimed to know of up to three leks of this Bornean endemic. One presumed lekking site at 200 m was visited twice. On 24 January 2014, one or two individuals were heard calling around 10h00, but remained out of sight, similar to descriptions in Phillipps & Phillipps (2011). On 27 February 2014, the lek was visited again around 11h00, but nothing was recorded. On a later date, a female was observed crossing the Posu River (160 m), not far from this lekking site. Singles and small groups of up to eight individuals were occasionally recorded foraging on the riverbanks of Posu and Joloi Rivers between February and July 2014, but none were recorded in January 2014 nor between October 2014 and December 2015. Some local people said that Bulwer's Pheasants were only present between February and September, but others were unfamiliar with any migratory behaviour. More surprisingly and worryingly, one resident stated that male birds were occasionally caught at lekking sites, not for food, but in order to make local cock fights more entertaining.

Bornean Peacock Pheasant *Polyplectron schleiermacheri* (EN)

Most local inhabitants were also familiar with this Bornean endemic and described it as rare or very rare. A calling male was

heard on several dates close to the field station (160 m) and a male and female were observed here. Later a female was observed crossing the helipad close to the field station, suggesting that this species might not avoid open spaces within the forest. A male was also seen crossing Joloi River far upstream (180 m) and one was heard calling in the same area on a later date. Two males were heard calling to each other west of Joloi River (200 m), indicating at least two, and quite possibly four, territories in the area. A sound recording of this species can be found on www.xeno-canto.org (XC180008). However, no vocalisations were heard from October 2014 to December 2015. There are few recent records of this rare pheasant (Frederiksson & Nijman 2004, Wielstra & Pieterse 2009).

Malaysian Honeyguide *Indicator archipelagicus* (NT)

Observed at two different locations (190 m and 350 m); these are the third and fourth documented records for Central Kalimantan of this species (Mann 2008, Woxvold & Noske 2011). A recording of its call can be found on www.xeno-canto.org (XC177935).

Maroon Woodpecker *Blythipicus rubiginosus*

The most commonly encountered woodpecker in this area. A nest was found in a small tree 1 m above the ground on 13 April 2014, contradicting Myers (2010) who states that this species nests at 20 m or higher.

Great Slaty Woodpecker *Mulleripicus pulverulentus* (VU)

Recorded on several dates from different localities (between 160 and 180 m). One unusually large group of six individuals was found by the Posu River.

Bornean Barbet *Megalaima eximia*

This endemic species was heard only once near the Joloi River at the surprisingly low altitude of 160 m; it normally occurs at higher elevations, but our sighting concurs with a record from the nearby Mohot River, where a single individual was found at a similar altitude (van Berkel *et al.* 2012). Our sighting might be explained by altitudinal migration as fruits were ripening more quickly at lower altitudes (JHF pers. obs.). There are only six previous records of this species from Kalimantan (Mann 2008, Brickle *et al.* 2010, van Berkel *et al.* 2012, Cheyne *et al.* 2012).

*Bornean Brown Barbet *Caloramphus fuliginosus*

This species is treated as a Bornean endemic following Short *et al.* (2014). It was recorded regularly from different locations, all between 160 and 280 m.

Helmeted Hornbill *Buceros vigil* (CR)

All hornbill species in Borneo are hunted, but this species is one of the most intensively hunted throughout its range, mainly for the ivory trade (Phillipps & Phillipps 2014, Collar 2015, Beastall *et al.* 2016). This was seen during February and March 2014 when a large number (>100) of hunters visited the Bukit Batikap area to hunt Helmeted and other hornbill species exclusively for their casques, confirming the speculation that organised crime targets this species (Collar 2015, Eaton *et al.* 2015, Beastall *et al.* 2016). A group of three hunters shot two Helmeted Hornbills and three Black Hornbills *Anthuracoceros malayanus* in one day, while another group of two hunters shot two Rhinoceros Hornbills *B. rhinoceros* in one day. A Helmeted Hornbill was also shot at on 30 January 2015. Although no targeted study has been conducted to assess the impact of hunting, the abundance of Helmeted Hornbills in Bukit Batikap Protection Forest seemed to drop markedly after March 2014. A detailed study is necessary to assess the impact of hunting, as the recent elevation from Near Threatened to Critically Endangered illustrates (Collar 2015, IUCN 2015, Beastall *et al.* 2016).

Common Kingfisher *Alcedo atthis*

Individuals were found close to the Posu River (170 m) on 21 April 2014 and on the Joloi River (180 m) on 14 November 2014, 4 February 2015 and 18 March 2015. These are the third to sixth records for Kalimantan according to Mann (2008), but Holmes & Burton (1987) also recorded this species in Kalimantan. Another individual was recorded in 2011 on the Babuat River (S. Jones *in litt.* 2014).

*Black-faced Kingfisher *Lacedo melanops*

This species has been split from Banded Kingfisher *L. pulchella* and is treated as a new endemic species following del Hoyo *et al.* (2014). It was first recorded on 16 February 2014 and heard regularly from several localities between 160 and 180 m.

Bornean Ground Cuckoo *Carpococcyx radiatus* (NT)

This elusive endemic (Frederiksson & Nijman 2004) was heard at five different locations between 160 and 180 m but was seen only once. A sound recording of this species can be found on www.xeno-canto.org (XC177800).

Short-toed Coucal *Centropus rectunguis* (VU) (Plate 1)

Seen and heard regularly from at least five different localities between 160 and 170 m, the species appeared to be as common as Greater Coucal *C. sinensis* in this area, but was reported solely from undisturbed mixed dipterocarp forest and never from areas with natural disturbance—such as areas with wind damage or tree fall—or man-made disturbance. There are only three prior records of this species from Central Kalimantan (Mann 2008, Cheyne *et al.* 2012).

Waterfall Swift *Hydrochous gigas* (NT)

Recorded only twice with certainty. The first record was from a small hill west of the Posu River (280 m) on 19 January 2014 and the other near the Joloi River (170 m) on 10 February 2014. These birds were identified based on their size (several other species were close by, allowing direct comparison), with deeply forked tail, completely dark colouration and smoother, more direct flight behaviour than those of swiftlet species. Furthermore, local people are surprisingly familiar with a swift species that breeds behind waterfalls, suggesting that this species breeds in the area. There are few records of this species for Borneo and Mann (2008) reports none from Kalimantan, although both Wilkinson *et al.* (1991) and S. Jones (*in litt.* 2014) recorded its presence on the Busang River and the Joloi River respectively. Therefore this record is treated as the third record for Kalimantan.

Mossy-nest Swiftlet *Collocalia salangana*, Black-nest Swiftlet *C. maxima* and Edible-nest Swiftlet *C. fuciphaga*

Although these three species of *Collocalia* swiftlets are said to be unidentifiable away from their nests (Phillipps & Phillipps 2014), a great deal of time was spent identifying swiftlets flying over rivers. All three species were identified based on tail shape, colour, size and flight behaviour (Myers 2010). Local Dayaks confirmed that they recognised nest types of all three species and claimed that they were present in caves in the area. No caves were visited, but harvesting of swiftlet nests from caves in the area provides a major source of income to the local Dayak people.

Large Frogmouth *Batrachostomus auritus* (NT) (Plate 2)

Four individuals were observed on several dates from three different locations (100–160 m). A nest was found on a branch overhanging the Joli River and a bird was present on the nest from at least 18 February until 9 March 2014. This is only the fourth record of this species for Kalimantan (Mann 2008, Woxvold & Noske 2011).

Large Green Pigeon *Treron capellei* (VU)

By far the most common *Treron* pigeon, it was observed approximately every other day. Three nests only 50 to 100 m apart were found on 17 January 2014 near the field station (160 m). Large congregations of this species were observed regularly, with numbers reaching 40 individuals in a single flock. Recent records of numbers of this magnitude are very rare (BirdLife International 2001, Iqbal *et al.* 2012), underlining the importance of this area for the species.

Red-legged Crake *Rallina fasciata*

A single bird was observed in late October and early December 2014 close to the field station (160 m), possibly attracted by food scraps. Two individuals were observed at the same site between September and December 2015 and the apparent absence of the species during the Palaearctic summer suggests that it may be migratory (Mann 2008). This species is a very scarce resident and passage migrant and this record is the first for Central Kalimantan, although it is probably under-recorded (Mann 2008).

**Pintail Snipe *Gallinago stenura*
and Swinhoe's Snipe *G. megala***

On 11 April 2014, 24 *Gallinago* snipes were flushed close to the Posu River (160 m), one of which called, and on 17 April 2014 another six individuals were flushed from a pebble beach on the Joloi River (130 m), again one individual called. Both calls were recorded and analysed and can be found on www.xeno-canto.org (XC176562 and XC176561 respectively). Although the first call most resembled Pintail Snipe and the second a Swinhoe's Snipe, sources are not conclusive about the use of vocalisations as an identification tool to distinguish between the two species (F. Rheindt *in litt.* 2014). Several unidentified snipes were also observed in November 2014 and on 12 April 2015. A study of the vocalisations of these two species and their value as an identification tool might help to confirm these and further records of these species, and could provide much insight about their distribution and migration. There are few definitive records of these species from Kalimantan, this would be the second for Pintail Snipe and the third for Swinhoe's Snipe (Mann 2008).

Red-necked Phalarope *Phalaropus lobatus*

On 16 October 2015 an individual in first-winter plumage was observed on the Joloi River. Mann (2008) reports that this species is a local passage migrant, but we consider a record this far inland noteworthy.

Wallace's Hawk Eagle *Spizeatus nanus* (VU)

On 20 April 2014 an adult, with two juveniles close by, was observed near the Joloi River (170 m), indicating that this species was breeding locally. Two months later, probably the same birds were observed a little further upstream (160 m), indicating that the juveniles were still accompanying the adult. Later a single bird was observed above the Joloi River (170 m).

Peregrine Falcon *Falco peregrinus*

On 2 February 2014 one was seen flying over the field station (160 m); it could not be identified to subspecies level, but was assumed to be of a migratory race. Records of migrants of this species in Borneo are rare, except on the north-west coast. This is the first record of the species for Central Kalimantan (Mann 2008).

Storm's Stork *Ciconia stormi* (EN)

An individual was observed several times above the Joloi River (170 m) and appeared to land close by. According to local people, this species was regularly seen at this site and a possible nest was found here in early December 2014. A single bird was also seen soaring above the Posu River (160 m) and landed close by. In

November and December 2015 additional sightings were made of single birds on the Joloi River (170 m).

Malayan Night Heron *Gorsachius melanolophus*

An adult was observed on the banks of the Joloi River (150 m) on 29 October 2014. On 23 March 2015 another individual that appeared to be moulting from juvenile to adult plumage was seen on the banks of the Joloi River (160 m). These are the first definite records of this occasional winter visitor for Kalimantan (Mann 2008).

Bornean Banded Pitta *Pitta schwaneri

This taxon is treated here as an endemic species, following Rheindt & Eaton (2010). It was found close to the Posu River (170 m) and a sound recording of this individual can be found on www.xeno-canto.org (XC177931). This is only the third record of the species for Central Kalimantan (Mann 2008, van Berkel *et al.* 2012, Cheyne *et al.* 2012).

Blue-headed Pitta *Pitta baudii* (Plate 3)

A Bornean endemic, males were heard and seen regularly between 160 and 220 m, with male/female pairs observed twice.

Hooded Pitta *Pitta sordida*

This was by far the most common pitta in the area, although sightings were mostly confined to riverbanks and riparian forest strips along the Posu and Joloi Rivers. An active nest was found on 1 July 2014 by other project members; this is a substantial expansion of the breeding season according to Erritzoe (2014) and Myers (2010).

Blue-banded Pitta *Pitta arquata*

This Bornean endemic species was heard only once, near the Posu River (170 m) on 17 February 2014. Two individuals were observed by other staff members in foothills east of the Joloi River (180 m) in March 2014. Garnet Pitta *P. granatina* appears to be much more common in this area. Even after analysis of sonograms of almost all monotone whistles, no other records of Blue-banded Pitta were confirmed. These are the second and third records for Central Kalimantan (Mann 2008).

Fairy Pitta *Pitta nympha* (VU) (Plate 4)

An individual was found on 13 April 2014 close to the Posu River (170 m) in mixed dipterocarp forest and was seen again on the night of 15 April 2014, roosting in a low tree about 200 m from where it was first seen. On 10 December 2014 a bird was again found close to the Posu River (170 m) and the species was recorded between the Posu and Joloi rivers (200 m) on 17 October 2015 and by the Posu River (170 m) on 20 October 2015. Between October and December 2015 the species was recorded from at least three other different sites. A bird was also recorded in 2013 by other staff members, near the Posu River (160 m) and remained at this site in riverside vegetation from at least 4 February to 17 March. These records are the third to tenth for Kalimantan (Mann 2008, van Berkel *et al.* 2012). Given this large number of records from Bukit Batikap Protection Forest, we infer that this area is an important wintering or migration site for this Vulnerable species.

Blue-winged Pitta *Pitta moluccensis* (Plate 5)

A local and uncommon migratory species; one bird remained near the field station in a patch of bamboo (160 m) from at least 2 February to 10 April 2014 and called regularly. Other individuals were heard and seen between these two dates further upstream on the Posu River (180 m) and close to the Joloi River (170 m). The species was also observed in late November and early December 2014, on 17 January 2015 and on 4 April 2015 close to the Posu River (160 m).

Hose's Broadbill *Calyptomena hosii* (NT)

Three individuals of this spectacular endemic were observed in a mixed feeding flock foraging on figs in the hills east of the Joloi River (210 m) on 20 November 2015. This is the first published record for Central Kalimantan (Mann 2008), although there is an unpublished record from the hills near Puruk Cahu from 2011 (S. Jones *in litt.* 2014) and therefore we treat this as the second record for Central Kalimantan.

Railbabbler *Eupetes macrocerus* (NT)

This species was heard calling from three different locations (150–180 m), but remained unseen. A sound recording can be found on www.xeno-canto.org (XC177801). Recent records of this species from Borneo are rare (Mann 2008).

Bornean Whistler *Pachycephala hypoxantha*

This endemic species was heard on one of the hills (750 m) east of the Joloi River, but remained out of sight. This is only the sixth record of this species for Kalimantan (Brickle *et al.* 2010).

Bornean Bristlehead *Pityriasis gymnocephala* (NT) (Plate 6)

This endemic was only recorded on three occasions in the area (160–280 m), supporting the suggestion that it is scarce in lowland dipterocarp forests (Phillipps & Phillipps 2011).

Hair-crested Drongo *Dicrurus hottentottus

Several of this mainly submontane species (Mann 2008) were observed from different sites (160–180 m) but it appeared rather scarce. Surprisingly this is only the sixth confirmed record for Kalimantan (Mann 2008, Brickle *et al.* 2010, Woxvold & Noske 2011, Cheyne *et al.* 2012).

Chestnut-capped Thrush *Zoothera interpres* (NT)

Only one individual was observed, several times, in November and December 2015 near the Posu River (160 m). This species is under pressure due to trapping for the songbird trade (Eaton *et al.* 2015). This is only the second record for Central Kalimantan (van Berkel *et al.* 2012).

Fulvous-chested Jungle Flycatcher *Rhinomyias olivacea*

One was found at 500 m east of the Joloi River. A sound recording can be found on www.xeno-canto.org (XC179628). This is the first published record for Central Kalimantan according to Mann (2008), although a good sound recording of this species from the Busang River area can be found on www.xeno-canto.org (XC69388) and an unpublished record exists from Muara Joloi from 2011 (N. Brickle *in litt.* 2016). Therefore, it is treated here as the third record of this species for Central Kalimantan. At lower elevations (160–270 m) Grey-chested Jungle Flycatchers *R. umbratilis* were encountered regularly. A bird with intermediate plumage features and a slightly different song to the Grey-chested Jungle Flycatcher but similar to intermediate birds described by Wilkinson *et al.* (1991) was observed to the west of the Joloi River (200 m).

Zappey's Flycatcher *Cyanoptila cumatilis* and Blue-and-white Flycatcher *C. cyanomelana

Two male *Cyanoptila* sp. flycatchers were observed on 26 March 2014 by the Posu River (180 m). One of these was later identified as Zappey's Flycatcher *C. cumatilis* (F. Rheindt *in litt.* 2014). This is the first record of Zappey's Flycatcher for Kalimantan (Mann 2008), although it is likely that this species is under-recorded as it was formerly considered conspecific with Blue-and-white Flycatcher *C. cyanomelana* (Leader & Carey 2012).

A male Blue-and-white Flycatcher was observed on 9 March 2015 at 280 m. This is the first confirmed record for Kalimantan of this species, the five previous records (Brickle *et al.* 2010, Dewi

et al. 2016) predate Leader & Carey (2012) and were not identified to taxon level.

Bornean Blue Flycatcher *Cyornis superbus*

This Bornean endemic was recorded from several different locations (160–180 m). On 24 March 2014 a female was seen carrying nesting material. This is only the fourth documented record for Central Kalimantan (Mann 2008, van Berkel *et al.* 2012, Cheyne *et al.* 2012).

Large-billed Blue Flycatcher *Cyornis caerulatus* (VU) (Plate 7)

Seen regularly between 160 and 180 m from 16 February 2014. This is the second documented record of this species for Central Kalimantan (Mann 2008, Cheyne *et al.* 2012).

Siberian Blue Robin *Luscinia cyane*

A female was observed on 19 April 2014 close to the Posu River (170 m), a male was seen on the hills (320 m) east of the Joloi River on 1 April 2015 and a pair was present east of the Posu River in November and December 2015. These are the first to third published records of this migratory species for Kalimantan (Mann 2008), although there is an unpublished record of a male from the Mohot River in 2011 (S. Jones *in litt.* 2014). Therefore we treat these records as the second to fourth records for Kalimantan, which is surprising as the species is a widespread passage migrant and winter visitor in most parts of Borneo (Mann 2008).

Straw-headed Bulbul *Pycnonotus zeylanicus* (VU)

Local people were very familiar with this species and keen to obtain any pertinent information as it is an extremely popular cage bird, persecuted with such vigour that its Vulnerable status is no longer appropriate (Eaton *et al.* 2015). Not surprisingly, this species was recorded on only seven occasions between January and July 2014 (160–180 m). It is a cause for concern that no records were made between October 2014 and December 2015 suggesting that even in very remote parts of Kalimantan, trapping pressure is pushing this species to extinction (Brickle *et al.* 2010, Eaton *et al.* 2015). The immense pressure on this species may already have caused its local extinction in the Bukit Batikap Protection Forest, as the lack of records in 2015 suggests.

Scaly-breasted Bulbul *Pycnonotus squamatus* (NT)

Seen once in a mixed-species flock on a small hill (280 m) south of the Posu River on 24 January 2015. This is the first record of this species for Central Kalimantan (Mann 2008).

Arctic Warbler *Phylloscopus borealis*

This migratory species actually consists of three cryptic taxa, split by Alström *et al.* (2011), and all are likely to occur in Borneo (Phillipps & Phillipps 2014); they are very difficult to identify using plumage characteristics, but vocalisations, especially song, are good indicators (Alström 2011). In March and April 2014 several *Phylloscopus* sp. were singing along the Posu River (160–170 m). After analysis of the sonograms (www.xeno-canto.org XC177805 and XC177892) it was clear that these birds were Arctic Warblers (Figure 2). The Japanese Leaf Warbler *P. xanthodryas* and Kamchatka Leaf Warbler *P. examinandus* have not yet been recorded in Borneo, but the latter has been found on the Philippines (Hoefflerle *et al.* 2013), indicating that it could be found on Borneo too.

Sooty-capped Babbler *Malacopteron affine* (NT)

One of the most abundant babbler species in this area. On 25 April 2014 a pair was observed with newly-fledged juveniles. This is an extension of the breeding season indicated by Collar & Robson (2014) and Myers (2010).

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Plate 1. Short-toed Coucal *Centropus rectunguis*, 22 April 2014.



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Plate 2. Large Frogmouth *Batrachostomus auritus* on nest, 18 February 2014.

JOY



Plate 3. Blue-headed Pitta *Pitta baudii*, 25 February 2014.



ADHY MARULY

Plate 4. Fairy Pitta *Pitta nympha*, 15 March 2013.

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Plate 5. Blue-winged Pitta *Pitta moluccensis*, 10 February 2014.



NICHOLAS S. BOYD

Plate 6. Bornean Bristlehead *Pytiriasis gymnocephala*, 3 April 2015.

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Plate 7. Male Large-billed Blue Flycatcher *Cyornis caerulatus*, 16 April 2014.



NICHOLAS S. BOYD

Plate 8. Plain Flowerpecker *Dicaeum minullum*, 6 March 2015.

All images were taken in Bukit Batikap Protection Forest, Central Kalimantan, Indonesia.

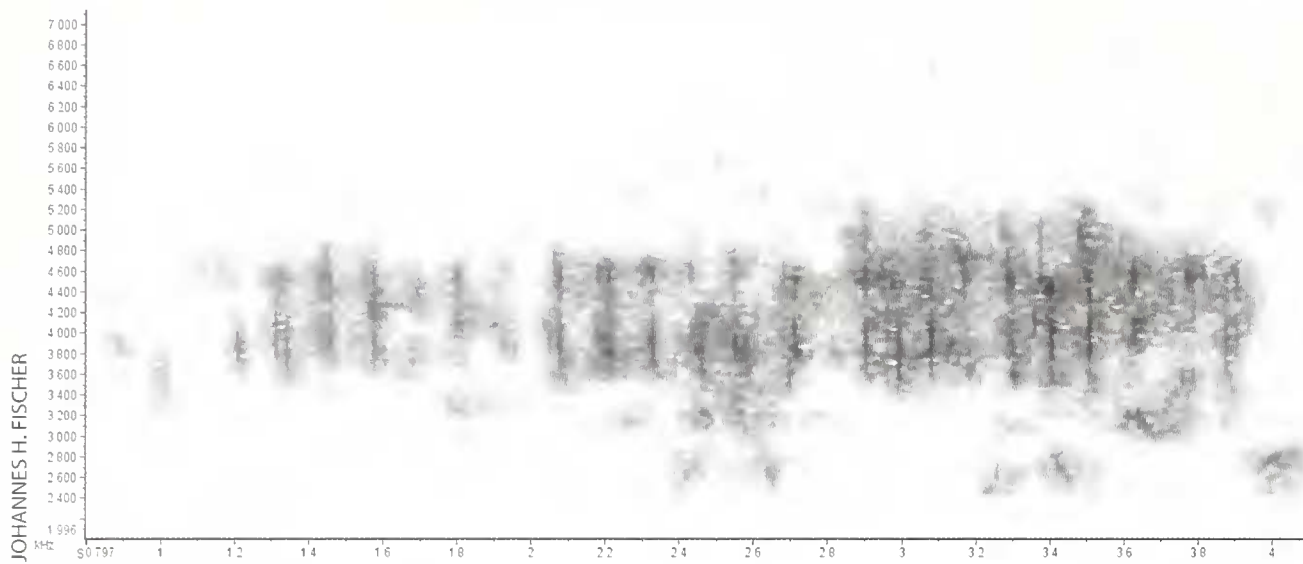


Figure 2. Sonogram of Arctic Warbler *Phylloscopus borealis* song, Bukit Batikap Protection Forest, Central Kalimantan, Indonesia, 26 March 2014.

Grey-breasted Babbler *Malacopteron albogulare* (NT)

Occasionally observed in mixed dipterocarp forest (160–220 m). This species prefers low nutrient forests such as peat swamps or *kerangas*, but also found in mixed dipterocarp forests (Sheldon 1987, Dutson *et al.* 1991). Yong *et al.* (2014) suggested uplisting this species to Vulnerable.

Bornean Wren Babbler *Ptilocichla leucogrammica* (VU)

Seen only once, close to the Posu River (170 m), but heard on several occasions at the same location. This is the fourth record of this endemic species for Central Kalimantan (Wilkinson *et al.* 1991, Mann 2008, Woxvold & Noske 2011, N. Brickle *in litt.* 2016).

Black-throated Wren Babbler *Napothera atrigularis* (NT)

Two individuals were observed near the Joloi River (160 m), only the second record of this endemic species for Central Kalimantan (Woxvold & Noske 2011).

White-necked Babbler *Stachyris leucotis* (NT)

Two individuals were seen on one of the hills (360 m) east of the Joloi River on 23 January 2015 and a single singing bird was seen near the Joloi River (170 m) on 11 April 2015; the second and third records of this species for Central Kalimantan (Mann 2008).

Chestnut-crested Yuhina *Yuhina everetti*

Small flocks of this endemic species were observed regularly on the hills (170–410 m). There is only one previous record of this species from Central Kalimantan (Mann 2008).

Yellow-rumped Flowerpecker *Prionochilus xanthopygius*

This Bornean endemic occurred together with Crimson-breasted Flowerpecker *P. percussus* in the area and their coexistence was also recorded by Holmes & Burton (1987) at the mouth of the Joloi River and by Wilkinson *et al.* (1991) on the Busang River, contra Myers (2010) who stated that these species are not known to occur together. Yellow-rumped Flowerpecker was found between 160 and 280 m, but Crimson-breasted Flowerpecker was only found at 160 m. The Ulu Barito IBA lies within the overlap of the ranges of these two species (Wilkinson *et al.* 1991), but Crimson-breasted Flowerpecker appears to be much less common in the Bukit Batikap Protection Forest.

Plain Flowerpecker *Dicaeum minullum* (Plate 8)

This species, rare on Borneo, was recorded on a small hill (280 m) south of the Posu River on 6 March 2015. This is the second record for Central Kalimantan (Mann 2008), although Wilkinson *et al.* (1991) suspected that it was present in the Ulu Barito area.

*‘Spectacled Flowerpecker’ *Species novum*

This potentially new species, probably a member of genus *Dicaeum*, has not yet been formally described. It was first reported by Edwards *et al.* (2009) from Danum Valley, Sabah, with a handful of subsequent reports from Labi Road, Brunei, in 2014 and the Maliau Basin, Sabah, in 2014 (Sykes & Loseby 2015). This taxon, which is probably endemic to Borneo (Phillipps & Phillipps 2014), was observed in Bukit Batikap Protection Forest between January and December 2015 on a small hill (280 m) south of the Posu River, with recordings of the call being made on 9 March and 25 November (www.xeno-canto.org XC239907 and XC301233). This is a significant extension of the currently known range of this taxon to the south of Borneo’s mountainous spine and is the first record for both Kalimantan and Indonesia (Boyd *et al.* 2016).

Bornean Spiderhunter *Arachnothera everetti*

This endemic species was recorded from just three different locations (160–180 m). There are only three previous records for Central Kalimantan, although it may be under-recorded due to confusion with the very similar Grey-breasted Spiderhunter *A. modesta* (Wilkinson *et al.* 1991, Mann 2008, Woxvold & Noske 2011, Cheyne *et al.* 2012).

Paddyfield Pipit *Anthus rufulus*

A single bird flew over the field station on 30 September 2015. Surprisingly, this is the first published record for Central Kalimantan, but the species has probably been overlooked (Mann 2008).

RECOMMENDATIONS

We recommend formal structured and targeted surveys within this area, as well as in other areas in the Ulu Barito IBA, to estimate population densities and confirm the importance of this region for key species. In particular, as the Ulu Barito IBA is one of the few places that host several very rare Galliformids, a special study focused on these elusive birds would greatly improve the understanding of their conservation requirements (Fuller & Garson 2000, Fuller *et al.* 2000, BirdLife International 2001). Furthermore, a detailed study devoted to determining the impact of hunting hornbills for their casques seems valuable (Collar 2015).

ACKNOWLEDGEMENTS

The BOSF Bukit Batikap Protection Forest orangutan reintroduction project is grateful for the funding and support from BHP Billiton, Svenska Postkod

Stiftelsen, US Fish and Wildlife Service, Great Apes Conservation Fund, Save The Orangutan Foundation, The Orangutan Project, Mohamed Bin Zayed Conservation Fund, Margot Marsh Biodiversity Foundation, Orangutan Outreach Pt. Musim Mas and the BOSF's global sister organisations. JF, NB and AvdK are indebted to BOSF in general and the field staff in particular for making the visit to this remote site possible. We also thank Bas van Balen, James Eaton, Sander Pieterse, Frank Rheindt, Jelle Scharringa and Ben Wielstra for their help with several identification challenges. We thank Samuel Jones and Nick Brickle for sharing their unpublished records and we are grateful to Heiko Wittmer, Nick Brickle and an anonymous reviewer for considerable improvements to the manuscript.

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Appendix 1.

Bird species recorded in Bukit Batikap Protection Forest from January 2014 to December 2015. Taxonomy and nomenclature is based on Inskipp *et al.* (1996) with the exception of those species marked with an *.

Key: † = Bornean endemic. †† = Bornean near-endemic. Threat status: CR = Critically Endangered. EN = Endangered. VU = Vulnerable. NT = Near Threatened. Occurrence in Borneo (Mann 2008): R = resident. W = winter visitor. P = passage migrant.

	Threat status	Occ		Threat status	Occ
Long-billed Partridge <i>Rhizathero langirostris</i>	NT	R	*Square-tailed Drongo Cuckoo <i>Surniculus lugubris</i>		R
Black Partridge <i>Melanoerperix nigro</i>	VU	R	Black-bellied Malkoha <i>Phaenicaphaeus diardi</i>	NT	R
Crested Partridge <i>Rollulus rouloul</i>	NT	R	Chestnut-bellied Malkoha <i>Phaenicaphaeus sumotranus</i>	NT	R
*Bornean Crested Fireback <i>Lophuro ignito</i> †	NT	R	Raffles's Malkoha <i>Phaenicaphaeus chlorophoeus</i>		R
Bulwer's Pheasant <i>Lophuro bulweri</i> †	VU	R	Red-billed Malkoha <i>Phaenicaphaeus jovonicus</i>		R
Bornean Peacock Pheasant <i>Polyplectron schleiermacheri</i> †	EN	R	Chestnut-breasted Malkoha <i>Phaenicaphaeus curvirastris</i>		R
Great Argus <i>Argusianus argus</i>	NT	R	Bornean Ground Cuckoo <i>Corpococcyx rodiius</i> †	NT	R
Malaysian Honeyguide <i>Indicator orchipelagicus</i>	NT	R	Shart-toed Coucal <i>Centrapus rectunguis</i>	VU	R
Rufous Piculet <i>Sasio obnormis</i>		R	Greater Coucal <i>Centrapus sinensis</i>		R
Rufous Waadpecker <i>Ceelus brochyrus</i>		R	Blue-rumped Parrot <i>Psittinus cyonurus</i>	NT	R
White-bellied Waadpecker <i>Dryocopus joversis</i>		R	Blue-crowned Hanging Parrot <i>Lariculus golgulus</i>		R
Banded Woodpecker <i>Picus miniaceus</i>		R	Long-tailed Parakeet <i>Psittacula langicouda</i>	NT	R
Crimson-winged Woodpecker <i>Picus puniceus</i>		R	Waterfall Swift <i>Hydrochous gigas</i>	NT	?R
Checker-throated Waadpecker <i>Picus mentalis</i>	NT	R	Glassy Swiftlet <i>Collocalio esculento</i>		R
Olive-backed Waadpecker <i>Dinapium rafflesii</i>	NT	R	Mossy-nest Swiftlet <i>Callacalia solangona</i>		R
Maroon Woodpecker <i>Blythipicus rubiginosus</i>		R	Black-nest Swiftlet <i>Collocalia maxima</i>		R
Orange-backed Waadpecker <i>Reinwardtipicus validus</i>		R	Edible-nest Swiftlet <i>Collocalio fuciphogo</i>		R
Buff-rumped Waadpecker <i>Meiglyptes tristis</i>		R	Silver-rumped Needletail <i>Rhaphidura leucopygialis</i>		R
Grey-and-buff Waadpecker <i>Hemicircus concretus</i>		R	Brown-backed Needletail <i>Hirundopus giganteus</i>		R
Buff-necked Waadpecker <i>Meiglyptes tukki</i>	NT	R	Asian Palm Swift <i>Cypsiurus bolosiensis</i>		R
Great Slaty Waadpecker <i>Mulleripicus pulverulentus</i>	VU	R	Fork-tailed Swift <i>Apus pacificus</i>		P
Gold-whiskered Barbet <i>Megalaima chrysapagan</i>	NT	R	Grey-rumped Treeswift <i>Hemiprocne langipennis</i>		R
Red-crowned Barbet <i>Megaloimo rofflesii</i>		R	Whiskered Treeswift <i>Hemiprocne comote</i>		R
Red-throated Barbet <i>Megalaima mystocophonus</i>	NT	R	Oriental Bay Owl <i>Phadilus bodius</i>		R
Yellow-crowned Barbet <i>Megalaima henrici</i>	NT	R	Reddish Scops Owl <i>Otus rufescens</i>	NT	R
Blue-eared Barbet <i>Megaloimo australis</i>		R	Barred Eagle Owl <i>Bubo sumotranus</i>		R
Bornean Barbet <i>Megaloimo eximio</i> †		R	Buffy Fish Owl <i>Ketupa ketupu</i>		R
*Bornean Brown Barbet <i>Colarhamphus fuliginosus</i> †		R	Brown Wood Owl <i>Strix leptogrammica</i>		R
Oriental Pied Hornbill <i>Anthroceros albirostris</i>		R	Brown Hawk Owl <i>Ninox scutuloto</i>		R, W
Black Hornbill <i>Anthroceros molayonus</i>	NT	R	Large Frogmouth <i>Batrachostomus ouritus</i>	NT	R
Rhinaceros Hornbill <i>Buceros rhinaceros</i>	NT	R	Gould's Frogmouth <i>Batrachostomus stellatus</i>	NT	R
Helmeted Hornbill <i>Buceros vigil</i>	CR	R	*Blyth's Frogmouth <i>Botrochostomus affinis</i>		R
Bushy-crested Hornbill <i>Anarrhinus goleritus</i>		R	Malaysian Eared Nightjar <i>Eurostapodus temminckii</i>		R
White-crowned Hornbill <i>Aceras camatus</i>	NT	R	Spotted Dove <i>Streptapelia chinensis</i>		R, ?W
Wrinkled Hornbill <i>Aceras corrugatus</i>	NT	R	Little Cuckoo Dove <i>Macropygia ruficeps</i>		R
Wreathed Hornbill <i>Aceras undulotes</i>	NT	R	*Ruddy Cuckoo Dove <i>Macropygia emiliono</i>		R
Red-naped Trogon <i>Horpoctes kosumbo</i>		R	Emerald Dove <i>Chalcophaps indica</i>		R
Diard's Trogon <i>Horpoctes diardii</i>	NT	R	Little Green Pigeon <i>Treron alax</i>		R
Cinnamon-rumped Trogon <i>Horpoctes arrhaphaeus</i>	NT	R	Thick-billed Green Pigeon <i>Treron curvirostra</i>		R
Scarlet-rumped Trogon <i>Horpoctes duvoucelii</i>	NT	R	Large Green Pigeon <i>Treron copellei</i>	VU	R
Dollarbird <i>Eurystomus orientalis</i>		R, W	Jambu Fruit Dove <i>Ptilinopus jombu</i>	NT	R
Camman Kingfisher <i>Alceda otthis</i>		W	Green Imperial Pigeon <i>Ducula aenea</i>		R
Blue-eared Kingfisher <i>Alceda meninting</i>		R	Mountain Imperial Pigeon <i>Ducula badia</i>		R
*Malay Blue-banded Kingfisher <i>Alceda peninsulae</i>	NT	R	Red-legged Crake <i>Rollina foscio</i>		R, P
Oriental Dwarf Kingfisher <i>Ceyx erithocus</i>		R, ?W	Pintail Snipe <i>Gallinago stenuro</i>		W, P
*Black-faced Kingfisher <i>Lacedo melonops</i> †		R	Swinhoe's Snipe <i>Gallinoga megal</i>		W, P
Stark-billed Kingfisher <i>Halcyon capensis</i>		R	Common Sandpiper <i>Actitis hypoleuc</i>		W, P
Black-capped Kingfisher <i>Halcyon pileata</i>		W	Red-necked Phalarope <i>Phalaropus labotus</i>		P
Rufous-collared Kingfisher <i>Actenoides concretus</i>	NT	R	Jerdon's Baza <i>Avicedo jerdoni</i>		R
Red-bearded Bee-Eater <i>Nyctyornis omictus</i>		R	Oriental Honey-buzzard <i>Pernis ptilorhynchus</i>		R, W
Moustached Hawk Cuckoo <i>Hieracaccyx vogons</i>		R	Bat Hawk <i>Macheiramphus alcinus</i>		R
*Malaysian Hawk Cuckoo <i>Hieracaccyx fugax</i>		R	Brahminy Kite <i>Haliastur indus</i>		R
Indian Cuckoo <i>Cuculus micropterus</i>		R, W	Lesser Fish Eagle <i>Ichthyophaga humilis</i>	NT	R
Banded Bay Cuckoo <i>Cacamantis sanneratii</i>		R	Grey-headed Fish Eagle <i>Ichthyophaga ichthyaeus</i>	NT	R
Plaintive Cuckoo <i>Cacamantis merulinus</i>		R	Crested Serpent Eagle <i>Spilornis cheelo</i>		R
Rusty-breasted Cuckoo <i>Cacamantis sepulcralis</i>		R	Crested Goshawk <i>Accipiter trivirgatus</i>		R
Little Bronze Cuckoo <i>Chrysocaccyx minutillus</i>		R	Japanese Sparrowhawk <i>Accipiter gularis</i>		W
Violet Cuckoo <i>Chrysocaccyx xanthorhynchus</i>		R	Rufous-bellied Eagle <i>Hieraetus kienerii</i>		R, ?W

	Threat status	Occ		Threat status	Occ
Changeable Hawk Eagle <i>Spizoctes cirrhotus</i>		R	Pacific Swallow <i>Hirundo tohitico</i>		R
Blyth's Hawk Eagle <i>Spizoctes olboniger</i>		R	Straw-headed Bulbul <i>Pycnanatus zeylonicus</i>	VU	R
Wallace's Hawk Eagle <i>Spizaetus nonus</i>	VU	R	Black-and-white Bulbul <i>Pycnonotus melonoleucos</i>	NT	R
Black-thighed Falconet <i>Microhierax fringillorius</i>		R	Black-headed Bulbul <i>Pycnonotus otriceps</i>		R
Peregrine Falcon <i>Falca peregrinus</i>		R, W	Scaly-breasted Bulbul <i>Pycnonotus squamotus</i>	NT	R
Little Egret <i>Egretta garzetta</i>		R, W	Grey-bellied Bulbul <i>Pycnonotus cyoniventris</i>	NT	R
Cattle Egret <i>Bubulcus ibis</i>		?R, W	Puff-backed Bulbul <i>Pycnonotus eutilatus</i>	NT	R
Darter <i>Anhinga melanogaster</i>	NT	R	Olive-winged Bulbul <i>Pycnonotus plumosus</i>		R
Little Heron <i>Butarides striatus</i>		R, W, ?P	Cream-vented Bulbul <i>Pycnanotus simplex</i>		R
Black-crowned Night Heron <i>Nycticorax nycticorax</i>		R, W	Red-eyed Bulbul <i>Pycnanatus brunneus</i>		R
Malayan Night Heron <i>Gorsuchius melanolaphus</i>		W	Spectacled Bulbul <i>Pycnanatus erythroptalmus</i>		R
Cinnamon Bittern <i>Ixobrychus cinnamomeus</i>		R, ?W	Finsch's Bulbul <i>Alphoixus finschii</i>	NT	R
Storm's Stork <i>Ciconia stami</i>	EN	R	Ochraceous Bulbul <i>Alphoixus achroceus</i>		R
*Bornean Banded Pitta <i>Pitta schwoneri</i> †		R	Grey-cheeked Bulbul <i>Alphoixus bres</i>		R
Blue-headed Pitta <i>Pitta baidii</i> †	VU	R	Yellow-bellied Bulbul <i>Alphoixus phaeocephalus</i>		R
Hooded Pitta <i>Pitta sardido</i>		R, ?W	Hairy-backed Bulbul <i>Tricholestes criniger</i>		R
Blue-banded Pitta <i>Pitta orquata</i> †		R	Buff-vented Bulbul <i>Iole alivacea</i>	NT	R
Garnet Pitta <i>Pitta gronotino</i>	NT	R	Streaked Bulbul <i>Ixas moloccensis</i>	NT	R
Fairy Pitta <i>Pitta nympha</i>	VU	R	Yellow-bellied Prinia <i>Prinia floiventris</i>		R
Blue-winged Pitta <i>Pitta maluccensis</i>		W	Rusty-rumped Warbler <i>Locustello certhiolo</i>		W, P
Dusky Broadbill <i>Carydon sumatranus</i>		R	Dark-necked Tailorbird <i>Orthotomus atragularis</i>		R
Black-and-red Broadbill <i>Cymbirhynchus macrarhynchus</i>		R	Rufous-tailed Tailorbird <i>Orthotomus sericeus</i>		R
Banded Broadbill <i>Euryloimus jovonicus</i>		R	Ashy Tailorbird <i>Orthotomus ruficeps</i>		R
Black-and-yellow Broadbill <i>Euryloimus ochromolus</i>	NT	R	Arctic Warbler <i>Phylloscopus borealis</i>		W, P
Green Broadbill <i>Calyptameno viridis</i>	NT	R	White-chested Babbler <i>Trichostama rastratum</i>	NT	R
Hose's Broadbill <i>Calyptomena hasii</i> †	NT	R	Ferruginous Babbler <i>Trichostama bicolor</i>		R
Golden-bellied Gerygone <i>Gerygone sulphurea</i>		R	Horsfield's Babbler <i>Molococincla sepiorim</i>		R
Asian Fairy Bluebird <i>Ireno puella</i>		R	Short-tailed Babbler <i>Molococincla moloccensis</i>	NT	R
Greater Green Leafbird <i>Chloropsis sonneroti</i>		R	Temminck's Babbler <i>Pellorneum pyrragenys</i>		R
Lesser Green Leafbird <i>Chloropsis cyanapagan</i>	NT	R	Black-capped Babbler <i>Pellorneum copistratum</i>		R
Blue-winged Leafbird <i>Chloropsis cochinchinensis</i>		R	Moustached Babbler <i>Molocopteron mogrirostris</i>		R
Tiger Shrike <i>Lanius tigrinus</i>		W, P	Sooty-capped Babbler <i>Molocopteron affine</i>	NT	R
Rail-babbler <i>Eupetes macracerus</i>	NT	R	Scaly-crowned Babbler <i>Malacopteron cinereum</i>		R
Bornean Whistler <i>Pachycephala hypaxantha</i> †		R	Rufous-crowned Babbler <i>Malacopteron magnum</i>	NT	R
Crested Jay <i>Plotylaphus golericulatus</i>	NT	R	Grey-breasted Babbler <i>Molocopteron albogulare</i>	NT	R
Black Magpie <i>Plotysmus leucopterus</i>	NT	R	Chestnut-backed Scimitar Babbler <i>Pomotorhinus montonus</i>		R
Slender-billed Crow <i>Corvus enco</i>		R	Bornean Wren Babbler <i>Ptiliacichlo leucagrommica</i> †	VU	R
White-breasted Woodswallow <i>Artamus leucarynchus</i>		R	Black-throated Wren Babbler <i>Napothero atrigularis</i> †	NT	R
Bornean Bristlehead <i>Pityriasis gymnocephala</i> †	NT	R	Striped Wren Babbler <i>Kenopia striata</i>	NT	R
Dark-throated Oriole <i>Oriolus xonthonotus</i>	NT	R	Rufous-fronted Babbler <i>Stochyris rufifrons</i>		R
Bar-bellied Cuckooshrike <i>Corocina striata</i>		R	Grey-headed Babbler <i>Stochyris paliacephala</i>		R
Lesser Cuckooshrike <i>Caracina fimbriata</i>		R	White-necked Babbler <i>Stochyris leucotis</i>	NT	R
Scarlet Minivet <i>Pericrocotus flammeus</i>		R	Black-throated Babbler <i>Stochyris nigricollis</i>	NT	R
Bar-winged Flycatcher-shrike <i>Hemipus pictotus</i>		R	Chestnut-rumped Babbler <i>Stochyris moculota</i>	NT	R
Black-winged Flycatcher-shrike <i>Hemipus hirundinaceus</i>		R	Chestnut-winged Babbler <i>Stochyris erythroptera</i>		R
Malaysian Pied Fantail <i>Rhipiduro javanica</i>		R	*Bold-striped Tit Babbler <i>Macranous barnensis</i>		R
Spotted Fantail <i>Rhipiduro perlato</i>		R	Fluffy-backed Tit Babbler <i>Mocronous ptilosus</i>	NT	R
Bronzed Drongo <i>Dicrurus oeneus</i>		R	Brown Fulvetta <i>Alcippe brunneicoudu</i>	NT	R
*Hair-crested Drongo <i>Dicrurus hottentattus</i>		W, P	Chestnut-crested Yuhina <i>Yuhina everetti</i> †		R
Greater Racket-tailed Drongo <i>Dicrurus paradiseus</i>		R	*White-bellied Erpornis <i>Erpornis zanthaleuca</i>		R
Black-naped Monarch <i>Hypothymis ozureo</i>		R	Yellow-breasted Flowerpecker <i>Prionochilus moculotus</i>		R
Asian Paradise-flycatcher <i>Terpsiphone porodisi</i>		R	Crimson-breasted Flowerpecker <i>Prionochilus percussus</i>		R
Common Iora <i>Aegithina tiphio</i>		R	Yellow-rumped Flowerpecker <i>Prianachilus xonhapygius</i> †		R
Green Iora <i>Aegithina viridissima</i>	NT	R	Scarlet-breasted Flowerpecker <i>Prionochilus tharacicus</i>	NT	R
Rufous-winged Philentoma <i>Philentoma pyrhapterum</i>		R	Yellow-vented Flowerpecker <i>Dicoeum chrysarrheum</i>		R
Maroon-breasted Philentoma <i>Philentoma velotum</i>	NT	R	Orange-bellied Flowerpecker <i>Dicoeum trigonostigma</i>		R
Large Woodshrike <i>Tephrodornis gularis</i>		R	Plain Flowerpecker <i>Dicoeum minullum</i>		R
Chestnut-capped Thrush <i>Zaathero interpres</i>	NT	R	**Spectacled Flowerpecker <i>Species navum</i>		R
Fulvous-chested Jungle Flycatcher <i>Rhinomyias olivaceo</i>		R	Plain Sunbird <i>Anthreptes simplex</i>		R
Grey-chested Jungle Flycatcher <i>Rhinomyias umbrotis</i>	NT	R	Brown-throated Sunbird <i>Anthreptes moloccensis</i>		R
Dark-sided Flycatcher <i>Muscicopo sibirico</i>		W, P	Red-throated Sunbird <i>Anthreptes rhadolomo</i>	NT	R
Asian Brown Flycatcher <i>Muscicopo douurico</i>		R, W, P	Ruby-cheeked Sunbird <i>Anthreptes singolensis</i>		R
Rufous-chested Flycatcher <i>Ficedula dumetaria</i>	NT	R	Purple-naped Sunbird <i>Hypogrammo hypagrammicum</i>		R
Blue-and-white Flycatcher <i>Cyanoptila cyanamelono</i>		W, P	*Van Hasselt's Sunbird <i>Nectarinio brosiliona</i>		R
*Zapppy's Flycatcher <i>Cyanoptila cumotilis</i>		W, P	Olive-backed Sunbird <i>Nectarinio jugularis</i>		R
Verditer Flycatcher <i>Eumyias tholossino</i>		R	Crimson Sunbird <i>Aethapygo siporaja</i>		R
Pale Blue Flycatcher <i>Cyornis unicolor</i>		R	Temminck's Sunbird <i>Aethapygo temminckii</i>		R
Bornean Blue Flycatcher <i>Cyornis superbus</i> †		R	Little Spiderhunter <i>Arochnothera longirastra</i>		R
Large-billed Blue Flycatcher <i>Cyornis coeruleotus</i>	VU	R	Thick-billed Spiderhunter <i>Arochnothera crassirastris</i>		R
Malaysian Blue Flycatcher <i>Cyornis turcasus</i>	NT	R	Long-billed Spiderhunter <i>Arochnothera robusto</i>		R
Grey-headed Canary Flycatcher <i>Culicicopa ceylonensis</i>		R	Spectacled Spiderhunter <i>Arochnothera flovigaster</i>		R
Siberian Blue Robin <i>Luscinia cyane</i>		W, P	Yellow-eared Spiderhunter <i>Arochnothera chrysoygenys</i>		R
Oriental Magpie Robin <i>Copsychus souloris</i>		R	Bornean Spiderhunter <i>Arachnothera everetti</i> †		R
White-rumped Shama <i>Copsychus moloboricus</i>		R	Eurasian Tree Sparrow <i>Posser mantonus</i>		R
Rufous-tailed Shama <i>Trichoxos pyropygo</i>	NT	R	Grey Wagtail <i>Matacilla cinerea</i>		W, P
Chestnut-naped Forktail <i>Enicurus ruficopillus</i>	NT	R	*Eastern Yellow Wagtail <i>Matacilla tschutschensis</i>		W, P
White-crowned Forktail <i>Enicurus leschenoulti</i>		R	Paddyfield Pipit <i>Anthus rufulus</i>		R
Hill Myna <i>Groculo religiosio</i>		R	Dusky Munia <i>Lonchuro fuscans</i> ††		R
Velvet-fronted Nuthatch <i>Sitta frontalis</i>		R	Scaly-breasted Munia <i>Lonchuro punctuloto</i>		R
Barn Swallow <i>Hirunda rustico</i>		W			